Telling it like it is:
Performance and evaluation through the lens of BioSense 2.0

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Session Objectives

1. Provide a brief overview of performance & evaluation requirements at CDC

2. Provide a general overview of program improvement – performance / evaluation / CQI

3. Provide a high-level overview of program evaluation

4. Identify general principles for developing performance measures

5. Demonstrate via BioSense 2.0 case study

OUR LANDSCAPE FOR PERFORMANCE & EVALUATION

Evolution of Performance Management in Government (Recent Past)

1993 ——————————————————————————————— **Present**

Government Performance and Results Act of 1993 (GPRA)
• Strategic Planning, Annual Performance Reports

President's Management Agenda (PMA)
❑ Budget and Performance Integration
❑ Program Assessment Rating Tool (PART)
  ▪ ExpectMore.gov
❑ Performance Improvement Officer/Council

Performance Management Agenda *
❑ Chief Performance Officer
❑ High Priority Performance Goals
❑ Information to lead, learn, and improve outcomes
❑ Performance.gov

*Tie to CDC
Dr. Frieden's NYC performance report and QPRs

GPRA Modernization Act of 2010:
Codifies High Priority Performance Goals, Performance Improvement Officers, Performance Management Competencies, etc.

CHANGE = GPRA now reported at Departmental level

At CDC…

OADPG — Office of the Associate Director for Program
ACCOUNTABILITY ~ EVALUATION ~ ADVANCEMENT

- Quarterly Program Reviews
- GPRA
- High Priority Goals
- HP 2020
- PPHF Measure Monitoring
- Chief Evaluation Officer
    - Program Evaluation Consultation

Office of the Chief Operating Officer (OCOO)
Business Integrity and Strategic Management Unit

- PPHF Oversight
- Business Services Planning and Monitoring

Enterprise IT Portfolio Office

- Enterprise Life Cycle Reviews
- OMB 300, Exhibit 53

OVERVIEW OF PROGRAM IMPROVEMENT – PERFORMANCE & EVALUATION
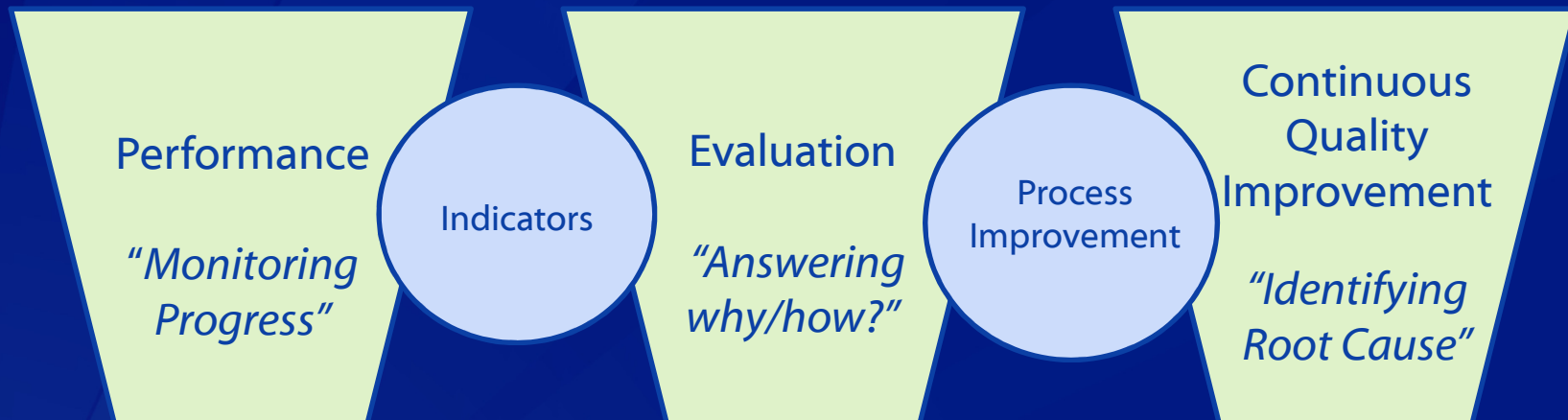
3 Buckets

Performance

"Monitoring"
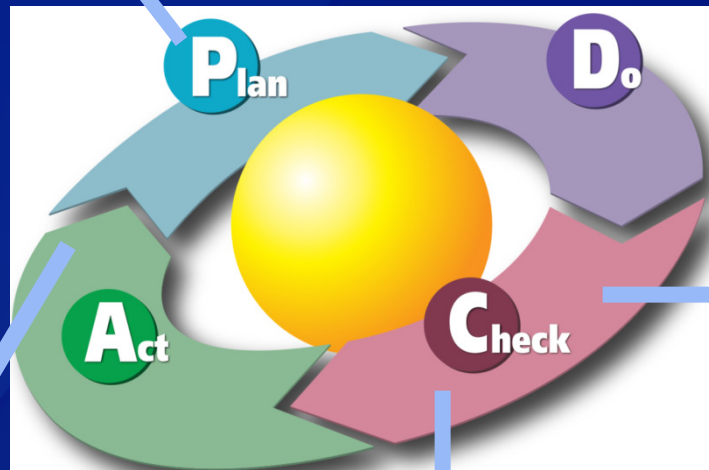
Evaluation

"Deep Dive"

Continuous Quality Improvement

"Root Cause"

3 Buckets - Areas of Overlap

Performance

"Monitoring Progress"

Indicators

Evaluation

"Answering why/how?"

Process Improvement

Continuous Quality Improvement

"Identifying Root Cause"

Continuous Improvement – Synthesis of Performance & Evaluation

1. Formative Evaluation / Needs Assessment; Establish Baseline

2. Performance monitoring and reporting (to inform meaningful discussion)

4. Summative Evaluation

3. Process Evaluation

# CDC Framework for Program Evaluation in Public Health (1999)

Steps

Engage Stakeholders

Describe the program

Focus the evaluation design

Gather credible evidence

Justify conclusions

Ensure use and share lessons learned

Standards
Utility
Feasibility
Propriety
Accuracy

ftp://ftp.cdc.gov/pub/Publications/mmwr/rr/rr4811.pdf
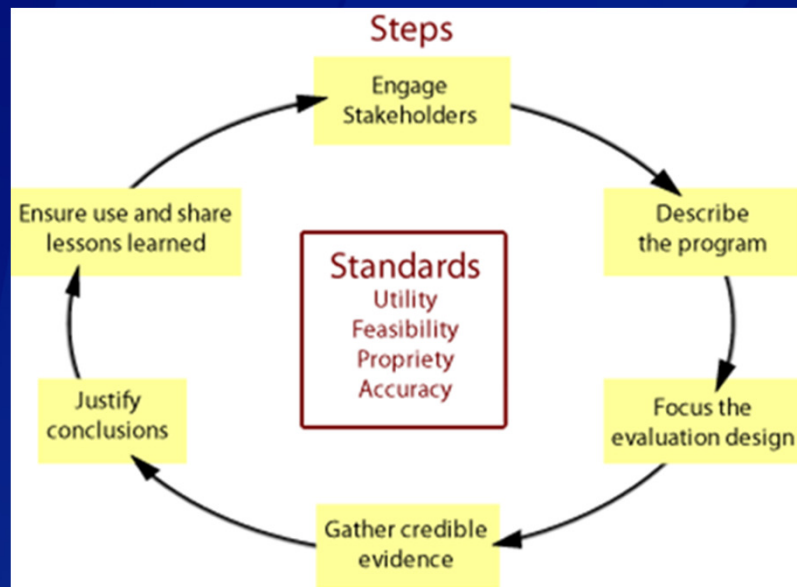
A few pearls of wisdom…

- Ensure utility (*or why undertake the evaluation at all?*)

  - Who will use the results - how best to communicate them?

  - Confirm a clear set of evaluation questions to be answered

- Don't have to have a logic model, but you do need a program description (why does the program exist?)

- Participatory approach – from initial engagement with stakeholders to sharing preliminary findings/inviting deliberation (ownership)

And speaking of logic models...

Program Action - Logic Model
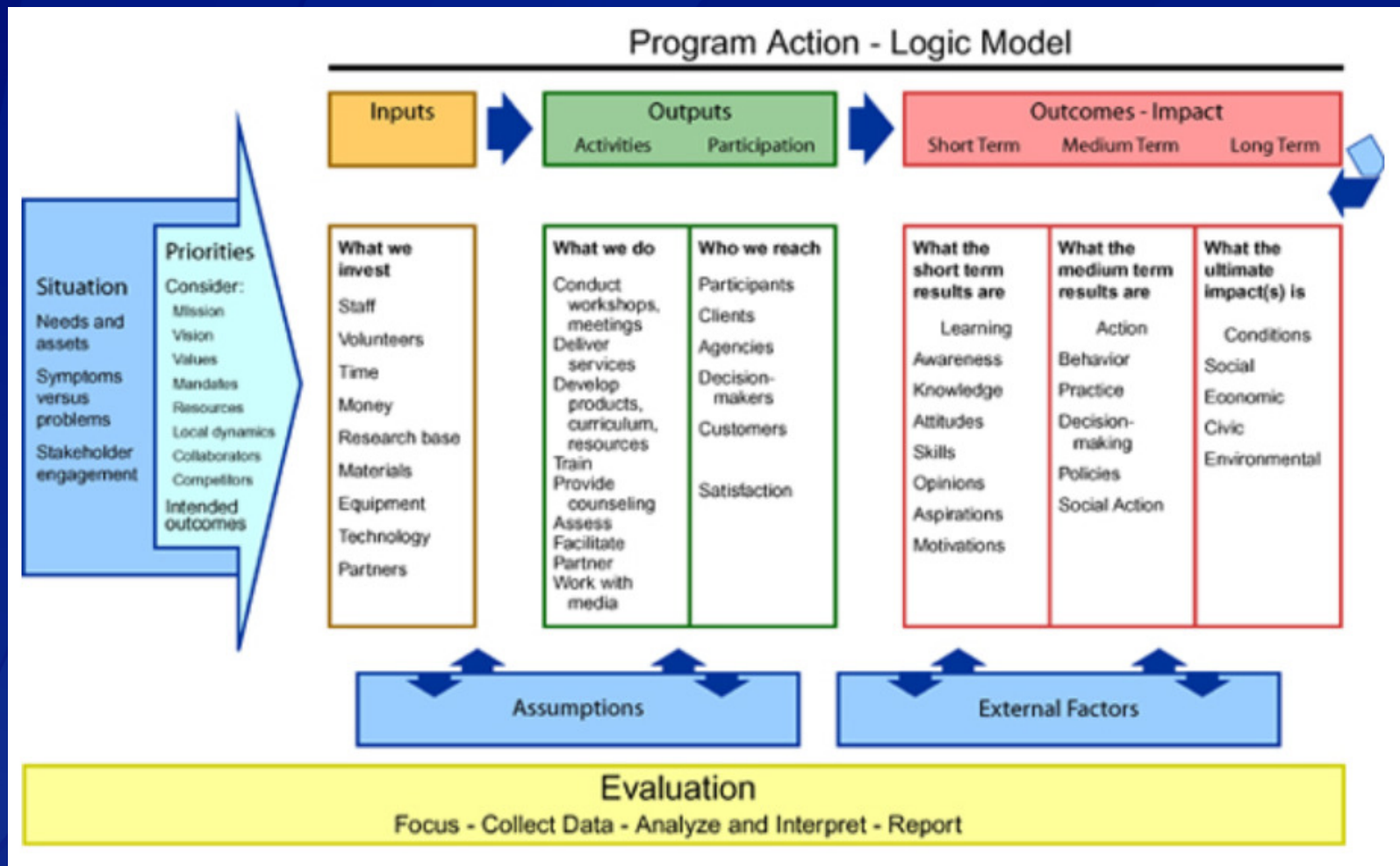
Developmental Evaluation

Evaluative Thinking Processes
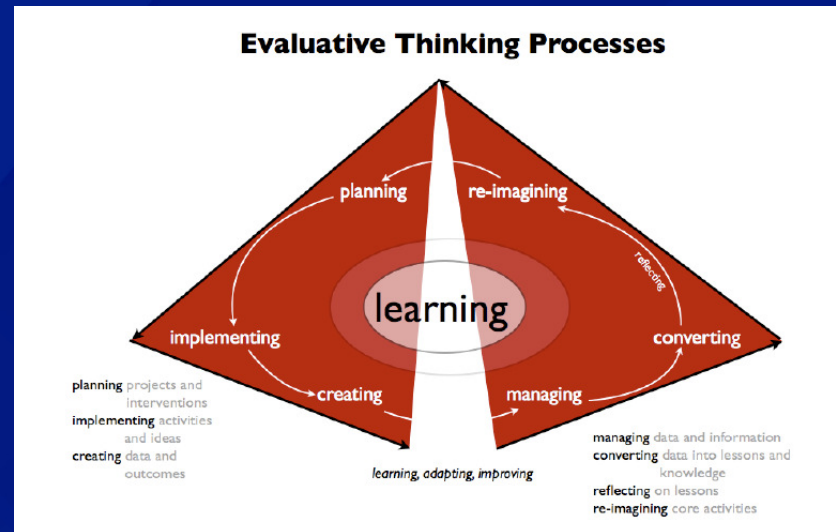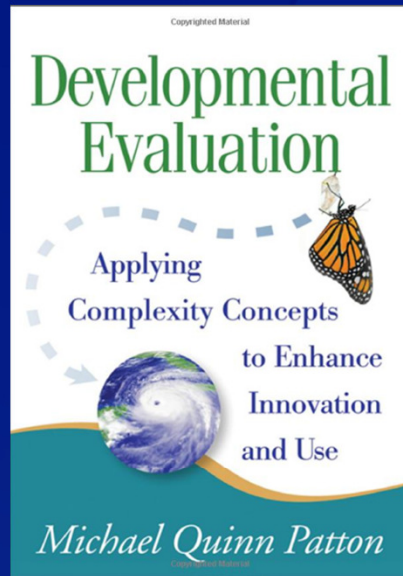
As the above triangles show, learning unites creating with managing. Each stage within the triangles, from planning to re-imagining, progressively informs the next through an open ethos of adapting and improving. The more we cycle through these stages, the more experienced and attuned our actions become. Learning is at both the heart of the diagram and our every activity, be it running a research project or a large institution: an ability to recognize failure and success allows us to take steps to correct, modify or amplify our actions. Learning allows for mid-course correction, in the understanding that goals will shift as activities progress and knowledge deepens. We learn more from failure than from success: for any individual or organization, *the only failure is not to learn.*[3]

Performance Management

Performance Measure Development Principles

A sound set of performance measures is…

- aligned with a strategic direction (goal or objective)
- limited in number
- reflective of varying types – output, outcome, efficiency
- developed via a systematic and participatory process
- based on valid, reliable, and timely data
- meaningful to guide program direction (course correction; ideally representative of a critical path)
- easily understood by outside audiences

Types of Metrics

- Performance measure – a target is set for a given timeframe (quarter, year) which conveys an expected level of performance.
  - E.g. "Increase the number of data use agreements"
    - FY 2011 baseline: 8
    - FY 2012 target: 24
    - FY 2013 target: 36
    - FY 2014 target: 48
    - FY 2015 target: 55

- Indicator – a "point-in-time" data point; by itself is not meaningful and, to be meaningful, must be used to establish a trend line (graph).
  - E.g. "Number of website hits"
    - FY 2008: 150,000
    - FY 2009: 280,000
    - FY 2010: 335,000

- Milestone – a qualitative marker for a significant achievement which is one "step" in a larger endeavor.
  - E.g. "Generate report with recommendations by March 2012."

Types of Metrics – Continued…

Performance Measures

- <u>Output Measures</u> reflect the internal activities (processes the program uses to achieve its purpose).

- <u>Outcome Measures</u> reflect public health impact (Is the program achieving its purpose?).

- <u>Efficiency measures</u> capture a program's ability to implement its activities and achieve results (outcomes and outputs), relative to resources (an input such as cost and/or time).

Metric Attributes

Performance Measures:

- Ambitious targets
  - Challenging with flat/declining funding, but the management objective is to achieve more for the same funding (drive efficiency and innovation).
- Sound data and validation processes
  - Identified data source
  - Established data validation processes

Milestones:

- Clear deliverable, time-bound

BIOSENSE 2.0 CASE STUDY

Overview of BioSense

BioSense 1.0

- mandated by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002
- CDC-centric collection and analysis of emergency department data from hospitals, DoD, VA for syndromic surveillance
- 8 state and local health departments participated

BioSense 2.0

- redesign began in 2010; launched in April 2012
- distributed system using cloud technology
- "community" approach
  - state and local health departments join via data use agreements (currently at 51)
  - governance consists of state, local, federal, and non-governmental organizations
- data sharing encouraged, but not mandated

BioSense 2.0 Evaluation Plan

BioSense 2.0
Final Evaluation Plan

April 2013

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4 Components:
- Performance Monitoring Framework

- Leveraging Partner Surveys of Use and Utility

- Usability Testing

- Case Studies

Data Visualization – Example Performance Dashboard

Continuous Improvement –
Cycle of Performance & Evaluation Applied to BioSense 2.0

1. Formative Evaluation = ENVIRONMENTAL SCANNING
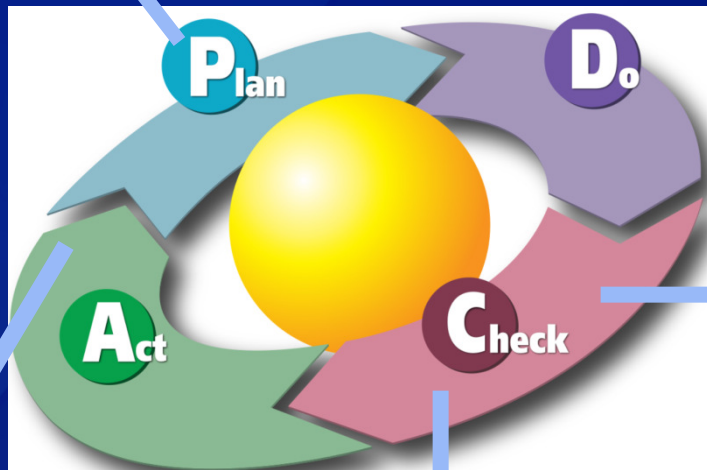
2. PERFORMANCE MONITORING FRAMEWORK

3. Process Evaluation = ONBOARDING CASE STUDIES

4. Summative Evaluation = EVALUATION OF B2.0 USE IN THE FIELD*